MSN Organics Private Limited

MSNOPL Products Presentation

Technical Services Department,
Organics

BELUMOSUDIL MESYLATE

Total Revenue 13.82/- Cr (72.9 kg)

BLSM2 exhibited unspecified impurities traced to input material variations. Process optimization for BLSM3, including controlled temperature and slow addition, effectively minimized impurity formation and achieved the desired PSD. Successfully commercial batches were produced, meeting quality specifications and yielding 32.4 kg for Apotex

Hurdles

APOTEX

32.4 kg Dispatch Completed

Hurdles

Initial challenges in BLSB1 (low yield due to excess IPA) and BLSA100224 (high Chloroacetamide impurity) were addressed through investigations and process adjustments. BLSM3 process optimization, including controlled temperature and slow addition, ensured consistent quality and achieved the desired PSD. Successfully commercial batches yielded 40.5 kg of API for formulation

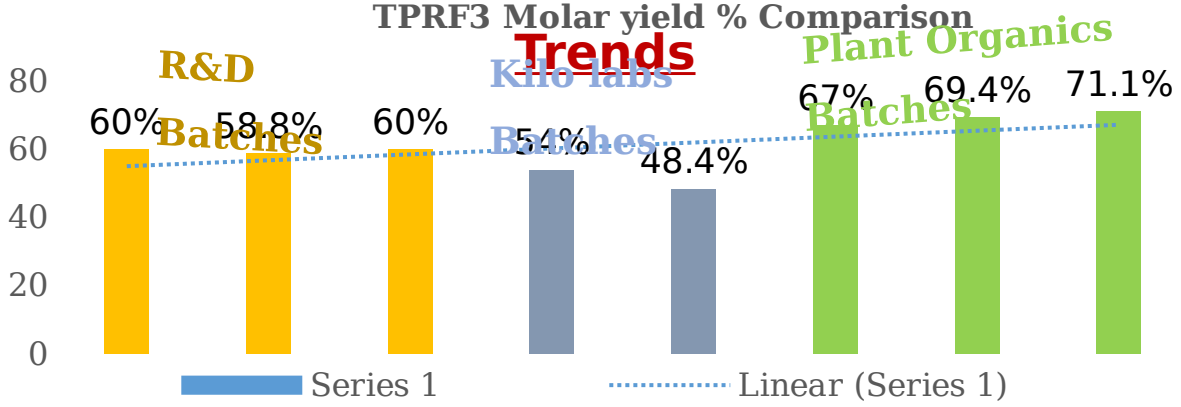
MSN Formulation

40.5 kg Dispatch Completed

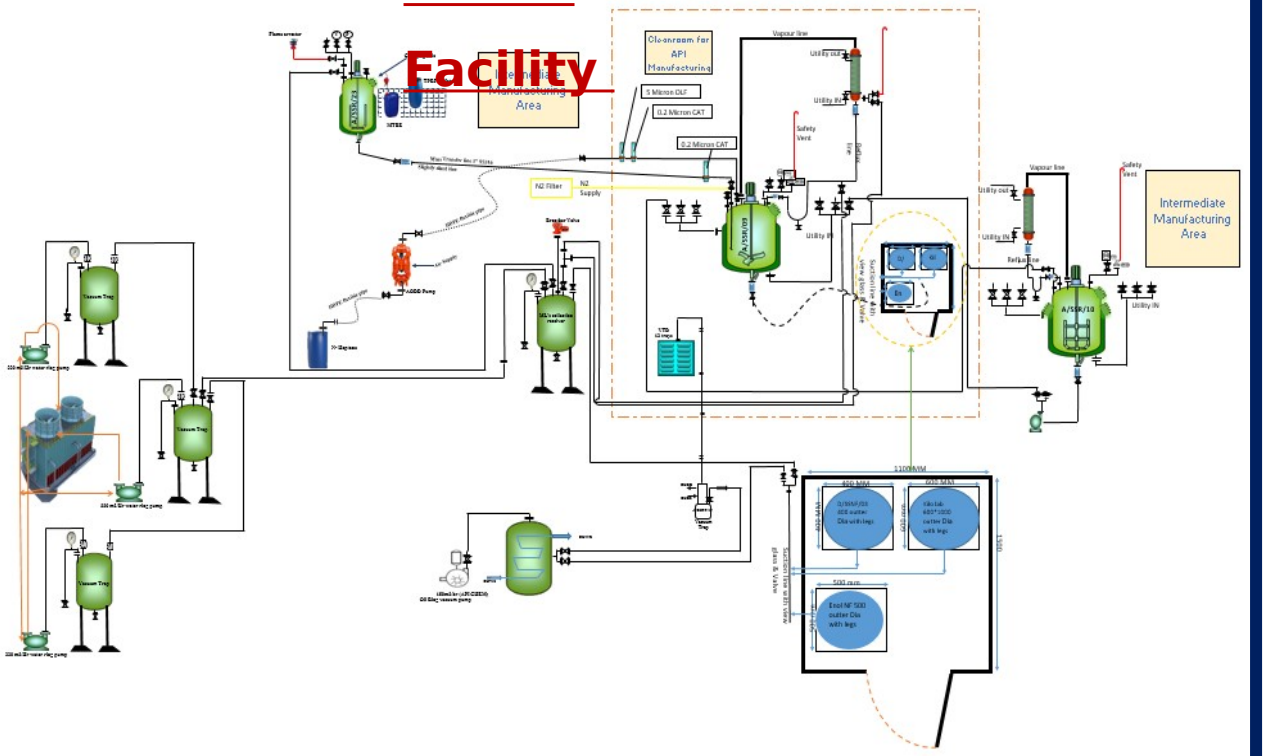
Belumosudil Mesylate PPT

TAPINAROF API

Yield Trends



TPRF4 Facility



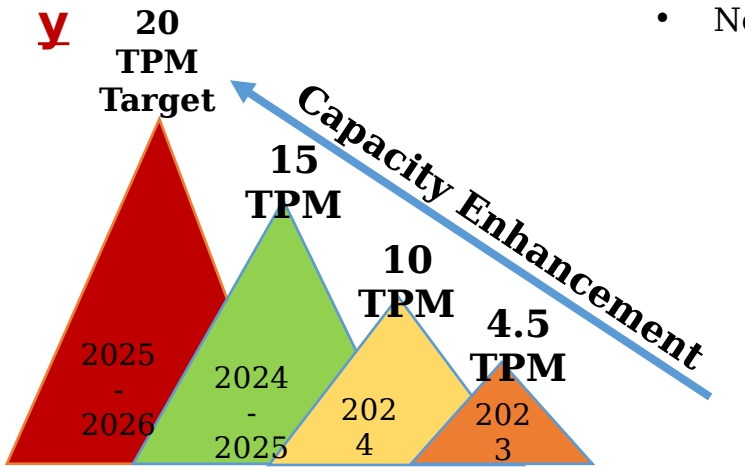
PXR Challenges

- TPRF4 Stage developed in Organic plant level.
- Introduced Rental De-humidifier to maintain RH below 40%, for eliminating water droplets on the wet cake during the Filtration.
- Executed Filtration operation in Three Different Nutsche filter.
- Continuous batched PXRD got complies.

Total Revenue 1.52/- Cr (11.38 kg)

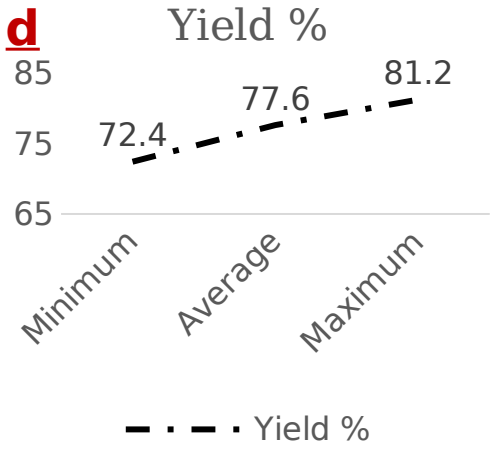
TAPENTADOL HCl

Capacity



- Capacity enhancement increased
- New 2.0 KL Hydrogenat

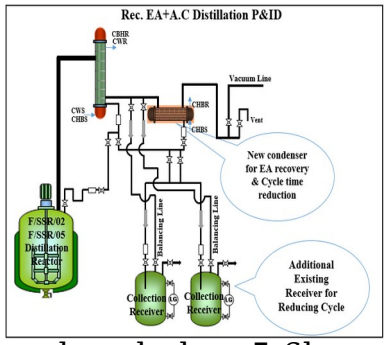
Yield



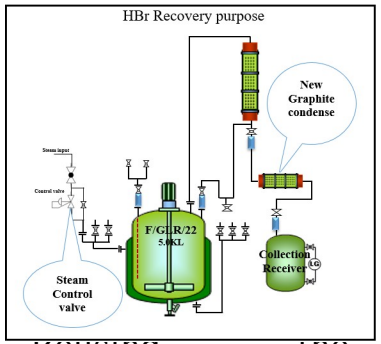
- Yield has been increased as per previous trend.
- Continuous Yield is being delivered

Corrosion rate PPT

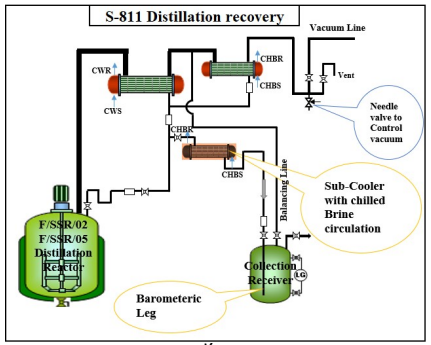
Recove


Rec. EA+A.C Distillation P&ID
New condenser for EA recovery & Cycle time reduction
Additional Existing Receiver for Reducing Cycle

reduced by 5-6hrs by introducing HE with chilled brine utility. Earlier 10-12hrs /batch duration used to be take

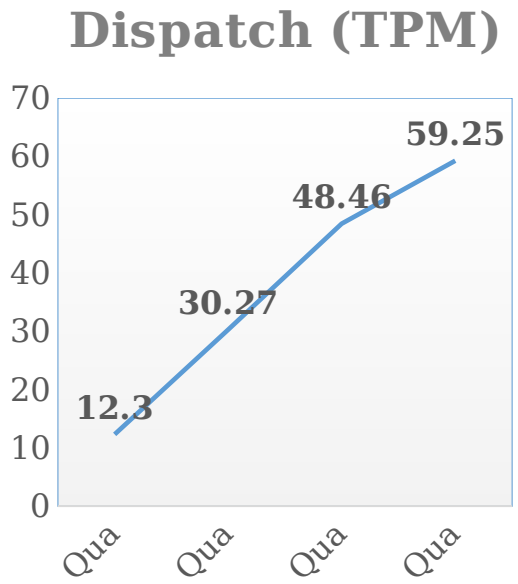


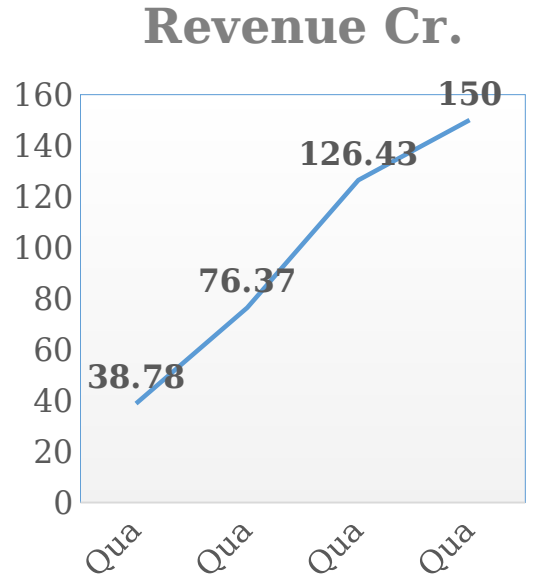
Reusing the Rec.HBr for reaction by introducing 2m2 Graphite condenser. **P**roposed Steam control valve for gradual heating &



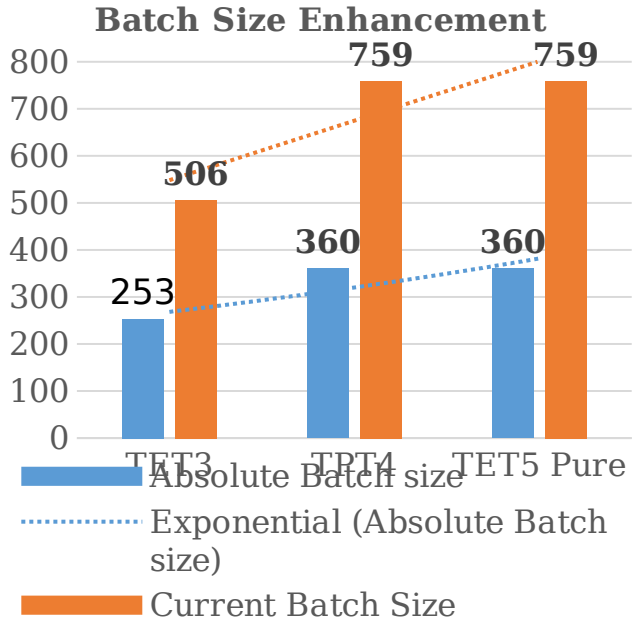
maintaining EA Rec. ~70-75% under vacuum. **P**roposal for Sub-cooler to increase the EA Rec. to more 5-10%.

Revenue



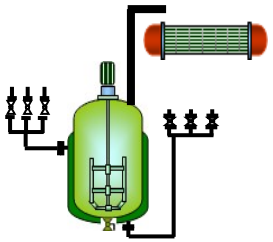


TAPENTADOL HCl



SILDEANFIL

CITRATE



ATOMOXETINE HCl

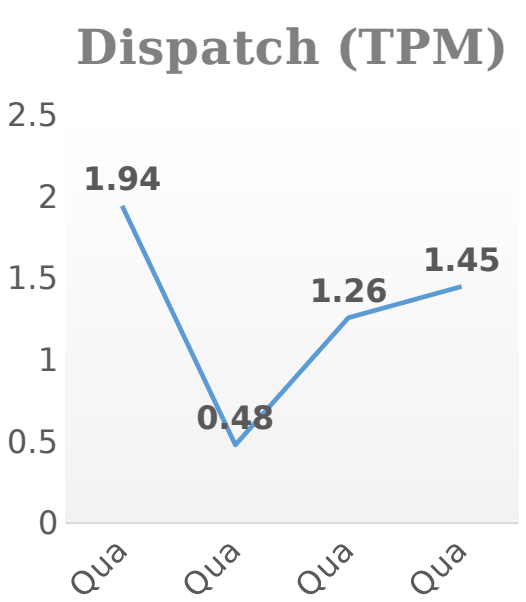
Capacity

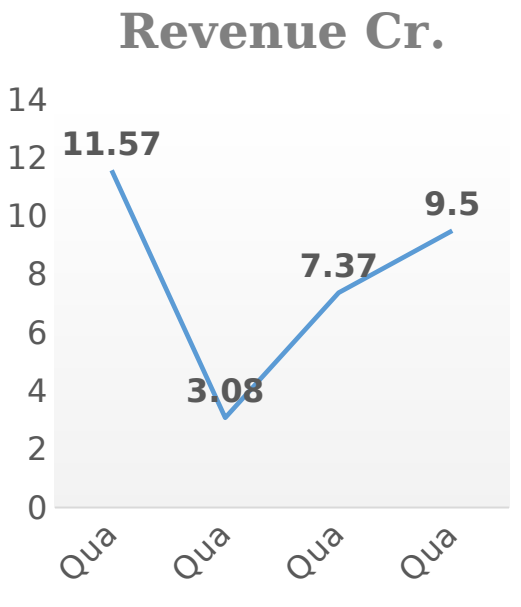
1. Capacity increased from 2 tons to 8.3 Tons by increasing the batch size and introducing the decanter system at work ups

CIP

Recovery

Revenue





ETIFOXINE

HCl

Engineering

Propeller

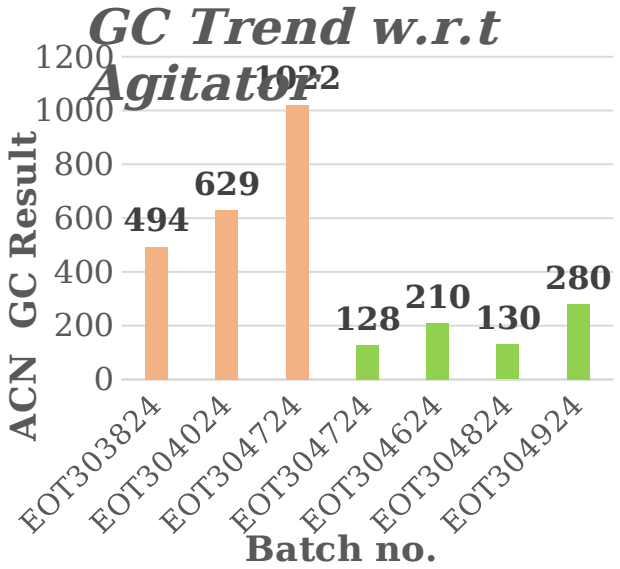
Np :- 0.4
NQ :- 0.3

Curved Blade Retreat Turbine

Np :- 1.0
NQ :- 0.6

CIP

Crystalline Material



Fluffy Material

The previous crystallization process for Etifoxine, employing a propeller agitator, resulted in significant Acetonitrile entrapment within the crystals. The transition to a CBRT agitator effectively mitigated this issue, achieving Acetonitrile levels below the 410 ppm limit in the first cut operation. This improvement eliminated the need for reprocessing and shortened the overall cycle time.

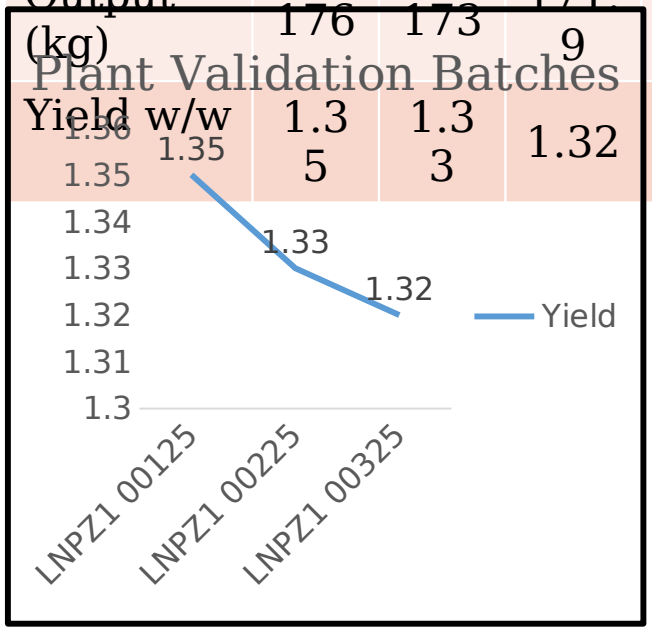
Lansoprazole

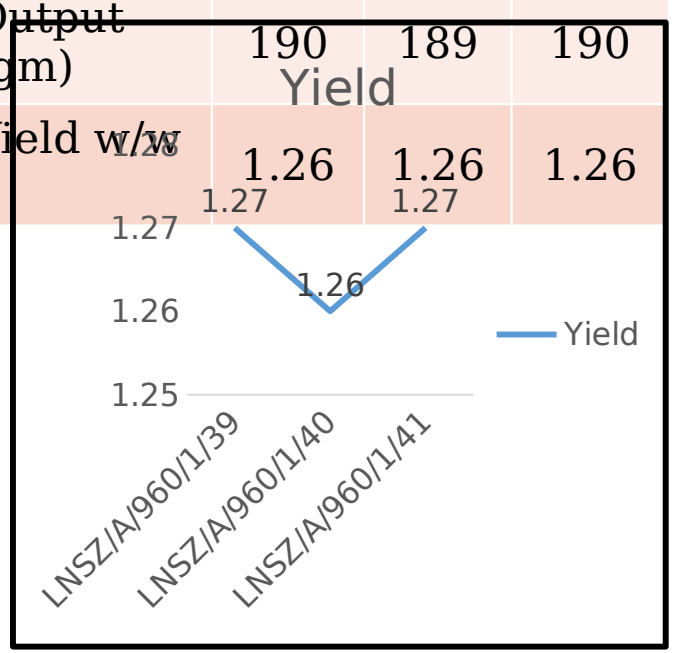
Target DMF Filling

Stage-1

Yield Comparison Plant

Plant Batch no.	LNPZ1 00125	LNPZ1 00225	LNPZ1 00325	R&D Batch no.	LNSZ/A960/1/39	LNSZ/A960/1/40	LNSZ/A960/1/41
Input (kg)	130	130	130	Input (gm)	150	150	150
Output (kg)	176	173	171.9	Output (gm)	190	189	190
Yield w/w	1.35	1.33	1.32	Yield w/w	1.26	1.26	1.26





Topiramate

TOP-2

		More Yiled batches					Less Yield bacthes			
Sr.no	Batch No	TRE105624	TRE106024	TOP206224	TOP206424	TOP201225	TOP205224	TOP206124	TOP206824	TOP200425
1	**TOR1 batch size(Kg)**	300	300	500	500	600	300	300	250	500
2	**Batch No's**	TOP104424	DNA	DNA	TOP104924-438.5kg TOP105024-61.5kg	TOP100725	DNA	DNA	DNA	TOP105524 TOP105624
3	**Water content**	DNA	DNA	DNA	0.14%	0.16% 0.23%	0.03%	DNA	DNA	DNA
4	**Cyclohexane(S-836) Fresh / Recovery**	DNA	DNA	DNA	DNA	Recovery WC :- 0.06%	Fresh	DNA	DNA	DNA
5	**Cyclohexane(S-836) Qty taken for M-398 solution preparation**	450	DNA	750	600	Done in 2 lots Lot-1 S-836 (450lts)+M-398 (202.5kgs). Lot-2 S-836 (450lts)+M-398 (202.5kgs).	450	450	126	DNA
6	**Addition Time**	560	920	1095	855	540	540	1635	720	1590
7	**Addition temp(C°)**	Min:-5.2	Min:-4.8	Min:-2.8	Min:-4.3	Min :- (-)4.0	Min:-2.6	Min:-3.8	Min:-3.6	Min:-5.7
		Max:-1.9	Max:-2.3	Max:1.1	Max:-1.2	Max:- (-)1.6	Max:1.2	Max:-1.4	Max:-1.2	Max:1.9
8	**Temp Raised Y/N**	N	N	N	N	N	N	N	N	N
9	**7 Hrs maintenance at temp. (C°)**	Min:-5.4	Min:-5.0	Min:-5.0	Min:-5.4	No maintenance	Min:-1.7	Min:-3.1	Min:-4.2	Min:-3.1
		Max:-5.2	Max:-4.6	Max:-4.4	Max:-1.1		Max:5.1	Max:NA	Max:-3.1	Max:-1.2
10	**1st reaction C / NC**	C	C	DNA	C	C	C	C	C	C
11	**Maintenance time upto obtain reluts from QC after submitting sample**	115	DNA	DNA	60		240	130	90	270
12	**Water qty for quenching**	1500	1000	2000	2500	2000	1500	1500	1260	2500
13	**Extra water for quenching**	DNA	600	DNA	DNA	DNA	DNA	DNA	DNA	DNA
14	**Distillation Vacuum(mmhg)**	500-620	500-620	600-620	560-620	580 -610	500-600	550-650	600-650	500-600
15	**Distillation Temp(°C)**	29.6-39.9	31.2-39.9	37.4-39.6	30.2-40.1	24.8 -37.1	25.8-39.9	32.8-39.4	10.8-39.6	23.3-40.1
16	**Distillation Time(min)**	1785	500	590	1230	1140	810	720	1365	2100
17	**Residue Wt (Kg)**	310	315	525	506	563	280	303	255	484
18	**M-006 passing temp**	(-)2.8 to (-)0.8	(-)3.6 to (-)4.4	(-)2.6 to (-)4.2	(-)2.6 to (-)0.6	(-)6.4 to (-)2.6	(-)4.6 to (-)3.2	(-)8 to (-)2.4	(-)4.9 to (-)2.2	(-)1.2 to (-)1.0
19	**M-006 passing time(min)**	840	DNA	780	1980	480	1170	1000	DNA	1430
20	**2nd reaction C/NC**	Complies	DNA	Complies	Complies	Complies	DNA	Complies	DNA	DNA
21	**Filtration un wanted salt qty**	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA	DNA
22	**Water content of filtrate Limit: NMT 1%**	DNA	DNA	DNA	DNA	DNA	DNA	0.02	DNA	DNA
23	**M-081 soln addition time**	85	120	150	180	165	120	150	90	150
24	**wet weight(kg)**	364	339.8	520	516	609	220	249	242	389.96